

A New Species of *Charitodoron* (Gastropoda: Mitridae) from Mozambique, with Notes on *C. veneris* (Barnard, 1964)

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ABSTRACT

Charitodoron rosadoi n. sp., from off Bazaruto Island, Mozambique, in 200–350 m, is described. This is the first Recent record of the genus *Charitodoron* Tomlin, 1932, from tropical waters. *Mitromorpha veneris*, Barnard, 1964, is referable to *Charitodoron*, and adult examples are described and figured for the first time.

Key words: Mitridae, southern African, continental shelf, *Charitodoron*.

INTRODUCTION

The genus *Charitodoron* Tomlin, 1932, is distinguished from other genera of the Mitridae by the total absence of columellar pleats. Cernohorsky (1976), who revised the described taxa, recognized three species, all of which are endemic to the Agulhas Bank, the temperate-water continental shelf off South Africa. Subsequently, Kilburn (1986:635, fig. 21) pointed out that the holotype of *Mitromorpha veneris* Barnard, 1964, from off Zululand, is actually a worn, juvenile example of a species of *Charitodoron*, but did not discuss its identity further. Most recently Lozouet (1991) recorded the genus for the first time from the Upper Oligocene of France, and illustrated several South African species.

During the Natal Museum Dredging Programme, a number of samples of a distinctive species of *Charitodoron* were collected off Natal and Zululand, confirming that the range of the genus extends into subtropical waters. The early whorls in this material agree with the holotype of the supposed turrid *Mitromorpha veneris* (Barnard, 1964). Subsequently, Mr. José Rosado of Maputo brought to my attention some specimens taken from crayfish traps off Mozambique, which prove to be an undescribed species of *Charitodoron*, and provide the first record of the genus from tropical East Africa.

ABBREVIATIONS

a/h = ratio of aperture length (measured along main axis) to total shell length.

b/h = ratio of maximum protoconch breadth to its height.

l/h = ratio of shell breadth to total length.

MHNM = Museu de Historia Natural, Maputo, Mozambique.

NMSA = Natal Museum, Pietermaritzburg.

NMDP = Natal Museum Dredging Programme.

SAMC = South African Museum, Cape Town.

TAXONOMY

Family MITRIDAE

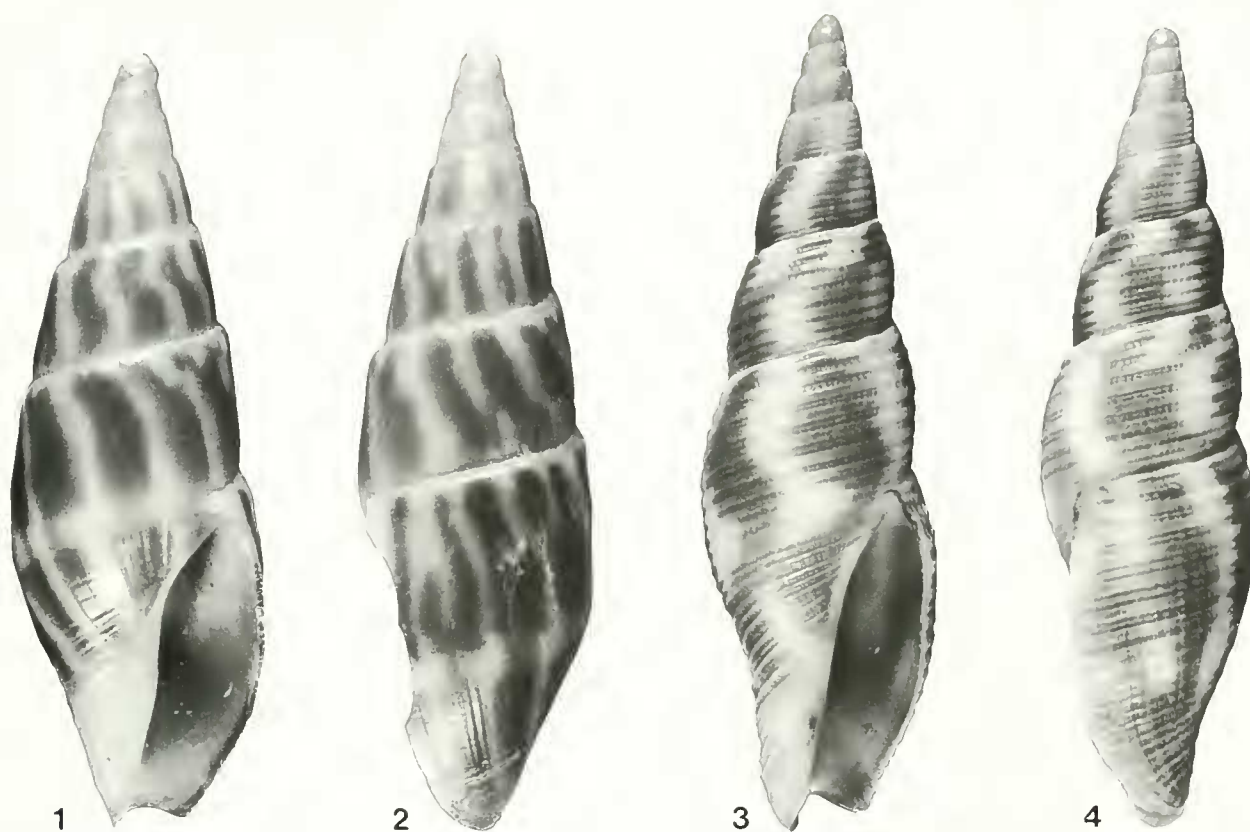
Charitodoron Tomlin, 1932

Charitodoron rosadoi n. sp.

Figures 1, 2

Diagnosis: Whorls almost flat, forming a very narrow shoulder immediately below suture, left side of base of body whorl shallowly concave; aperture with greatest width posterior to middle, columella medially convex, siphonal notch shallow; base of body whorl with 10–12 irregular spiral lirae, sculpture elsewhere weak and inconspicuous, initially of extremely fine axial riblets, becoming somewhat stronger on later whorls (20–30 on penultimate one), but remaining weak and irregular, forming a row of feeble nodules below suture; cream to brownish-white, with axial flames of brownish-orange, interrupted by a pale band at mid-body whorl; base of body whorl white. Protoconch breadth 0.98–1.00 mm. Maximum length 16.9 mm.

Description: Shell fusiform ($l/h = 0.29–0.35$), aperture narrow, $a/h = 0.39–0.42$; whorls almost flat, forming a very narrow shoulder immediately below suture, left side of base of body whorl shallowly concave; base slightly oblique, outer lip slightly foreshortened relative to base of columella. Teleoconch whorls approximately 5.4 in number. Aperture with greatest width posterior to middle, gradually tapering anteriorly; parietal region shallowly concave, columella medially convex, without trace of pleats; inner lip with callus deposit only in columellar region, bordered by a longitudinal depression (scarcely a false umbilicus); outer lip thin [edge damaged in all examples examined]; siphonal notch shallowly and obliquely U-shaped.



Figures 1–4. *Charitodoron rosadoi* n. sp. and *C. veneris*, (Barnard, 1964). **1–2.** *Charitodoron rosadoi*, holotype NMSA L1078, 16.9 × 5.5 mm. **3–4.** *C. veneris*, NMSA D4223, off Durban, 130 m, 24.0 × 7.2 mm.

Surface superficially smooth, other than spiral ridging on base of body whorl; under magnification whorls are seen to be axially ribbed, ribs initially extremely fine, indeed little stronger than growth lines, on later whorls strengthening, but remaining weak and irregular; ribs slightly arcuate, moderately prosocline, spacing irregular, forming a row of feeble nodules where they terminate on the subsutural berm; 20–30 ribs on penultimate whorl, becoming obsolete on later part of body whorl. Extremely fine and faint spiral grooves visible on 2nd and 3rd whorls; base of body whorl with 10–12 irregular spiral lirae.

Protoconch somewhat papilliform, limit ill-defined, evidently about 1.7 whorls; smooth, but fine axial riblets developing towards termination, and continuing onto 1st teleoconch whorl; dimensions: breadth 0.98–1.00 mm, height 0.80–0.88 mm (b/h = 1.14–1.23).

Ground color cream to brownish-white, patterned with axial flames of brownish-orange, interrupted by a pale band at mid-body whorl; base of body whorl white.

Dimensions: 16.9 × 5.5 mm (holotype).

Range: Known only from the type locality.

Type material: Holotype NMSA L1078/Tl 168, off Bazaruto Island (21°40'S; 35°25'E), Mozambique, in c. 200–350 m, in a crayfish trap. Paratypes 1 and 2, same data,

in MHNM and private collection J. Rosado respectively. All type specimens appear to have been inhabited by pagurids.

Remarks: Of described species, *Charitodoron rosadoi* shows closest resemblance to *C. agulhasensis*, (Thiele, 1925) of the Agulhas Bank; in particular, the spire whorls of the latter species have a similar profile (although slightly more convex, with a weaker subsutural shoulder) and the color pattern is similar although much more muted; however, in *C. agulhasensis* the early whorls are characterized by much stronger spiral sculpture and the body whorl is much more convex. The ranges of *C. rosadoi* and *C. agulhasensis* are widely separated; the northernmost locality at which the latter species was found during the NMDP was off Mendu Point, Transkei (32°22.6'S; 29°00.4'E, in 250–260 m).

Etymology: Named in honor of its discoverer, Mr. José Rosado.

Charitodoron veneris (Barnard, 1964)

Figures 3–4

Mitromorpha veneris Barnard, 1964:16. Type locality: Off Cape Vidal, Zululand, 80–100 fathoms [≈ 145–180 m].

Charitodoron veneris: Kilburn, 1986:635, fig. 21.

Diagnosis: Whorls convex, suture deep, left side of base of body whorl markedly concave; aperture with greatest width anterior to middle, columella flattened, siphonal notch deep; sculpture of strong, flat-topped spiral lirae, their interstices with coarse collabral threads, feebly indicated on tops of lirae, 8–11 lirae on penultimate whorl, plus a thin thread below suture; white with axial blotches of brownish-orange, markings occasionally very pale. Protoconch breadth 1.08–1.15 mm. Maximum length 24 mm.

Description: Shell fusiform ($b/h = 0.29\text{--}0.30$), with narrow aperture ($a/h = 0.42\text{--}0.49$); whorls convex, with greatest width at basal 0.3 of each whorl, suture deep; left side of base of body whorl markedly concave; base slightly oblique, outer lip slightly foreshortened relative to base of columella. Teleoconch whorls up to 6. Aperture with greatest width anterior to middle; parietal region shallowly concave, columella straight, callus deposit thin; siphonal notch deep and asymmetrically U-shaped; outer lip thin.

Sculptured by flat-topped spiral lirae, their interstices with coarse collabral threads, feebly indicated on tops of lirae. First whorl with 6–9, close-set lirae, becoming more widely-spaced on later whorls (intervals often as wide as lirae); 8–11 lirae on penultimate whorl, plus a thin lira below suture, base of body whorl with 8–11 narrow lirae plus 13–18 somewhat angular and irregular lirae on rostrum.

Protoconch papilliform, 1.7 whorls, smooth with fine axial plicae near termination, termination sharply indicated; breadth 1.08–1.15 mm, height 1.00–1.25 mm ($b/h = 0.92\text{--}1.05$). White with axial blotches of brownish-orange, markings occasionally very pale.

Dimensions: 24.0 × 7.2 mm (largest individual examined).

Type material: Holotype SAMC A8750 (Kilburn, 1986: fig. 21).

Distribution: Continental shelf of Zululand and Natal (Cape Vidal to Amanzimtoti), 98–320 m (fresh shells).

Material examined: (all NM: NMDP unless otherwise stated): ZULULAND: S. E. of Neill Peak (Cunge), 320–340 m, sandy mud (E4023); S. E. of Port Durnford, 310–320 m, glutinous sandy mud (E3190); same locality, 153 m, mud, stones (E4585); off Matigulu River mouth, 300 m, soft mud (E8903); same locality, 145 m, mud, shell rubble (E8791); same locality, 200–220 m, mud, coarse sand (E9024). NATAL: off Tongaat Bluff, 100 m, coarse sand mud (E9817); same locality, 120 m, sandy mud (E9968); off Sheffield Beach, 150 m, muddy sand (E9237); same locality, 110 m, muddy sand (E9303); S. E. of Sheffield Beach, 100–105 m, glutinous gray mud (E5038); N. E. of Umhlanga Rocks, 98 m, fine sand (S256); same locality, 107 m (B6297: A. Connell); off Durban, 130 m,

sandstone gravel, some rocks (D4223); same locality, 95 m, fine, slightly muddy sand (D4059); same locality, 110–120 m, coarse muddy sand (D3816); same locality, 100 m, very fine muddy sand (B5875); same locality, 104 m (B6287: A. Connell); same locality, 104–110 m, muddy sand, broken shells (D4018); same locality, 150 m, sandstone gravel and some sponge, living (D4172); same locality, 100 m, slightly muddy sand (D3898); off Umlaas Canal, 150 m, coarse sand, numerous spatangoids, pebbles (D789); same locality, 150 m, coarse sand (D865); off Amanzimtoti, 260–270 m, medium sand (D1 188); same locality, 115–125 m, medium sand (D1 285).

Remarks: Juveniles of the present taxon were compared (Kilburn, 1986) with the worn and broken holotype of *Mitromorpha veneris*, and found to agree.

Charitodoron veneris is characterized by stronger spiral sculpture than any other Recent member of the genus. There is a distinct but superficial resemblance in shape, sculpture and color pattern to a number of members of the conid genus *Daphnella* Hinds, 1844 (s.l.), but characters of protoconch and outer lip distinguish them at a glance.

Empty shells of *C. veneris* are not rare, although in adults the outer lip is almost always damaged. The foregut anatomy of the only example to be taken alive is presently being examined by Y. Kantor.

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